

WISCONSIN ENDANGERED RESOURCES REPORT 20

BUREAU OF ENDANGERED RESOURCES 1985 ANNUAL REPORT

Edited by S. Kelly Kearns

SUMMARY

Thorough statewide surveys were conducted for endangered and threatened species, including red-necked grebe, Forster's and common terns, great egret, piping plover, double-crested cormorant, osprey, bald eagle, timber wolf, kitten tail (*Besseyia bullii*), and monkshood (*Aconitum noveboracense*). Less intensive surveys were conducted for other species of concern. Staff and volunteers conducted breeding bird surveys on over 150 natural areas, and auditory frog surveys on ca 56 roadside routes. Captive-produced barn-owls were released, nest boxes erected, and radio telemetry studies conducted on wild and captive-produced birds. Management of nest sites also occurred for Forster's and common terns, piping plover, double-crested cormorant, and osprey. Research began on declining grassland birds. Timber wolf populations were monitored with the help of radio tracking, and studies began on the extent and effects of parvovirus. Barn-owl, timber wolf, and pine marten recovery plans were drafted. Twenty species of wild plants were added to the state's Endangered and Threatened Species List.

Three new Natural Areas were acquired, 4 were expanded, and 2 others were added to the system through dedication, comprising a total of 2,473 acres. Natural Areas management plans were completed and user surveys were conducted. Areas were managed by prescribed burns, brush and purple loosestrife control, fencing, construction of boardwalks, etc. We reviewed DNR master plans, U.S. Forest Service management plans and environmental impact assessments, administered ginseng and endangered species permit programs, helped develop regulations, conducted public education programs, and coordinated volunteers. An 'Adopt an Eagle Nest' program was begun and raised \$10,000 in its first year. With partial funding from The Nature Conservancy, a new Natural Heritage Inventory program was initiated. New staff include a zoologist/coordinator, botanist, ecologist, and data manager. The Bureau of Endangered Resources is funded largely by voluntary contributions to the Endangered Resources Fund, which netted \$472,000 in 1985. An 'Adopt an Eagle Nest' program was begun and raised \$10,000 in its first year.

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NONGAME SPECIES SECTION



SURVEYS AND RESEARCH

Breeding Bird Surveys on Scientific and Natural Areas

Forty-one cooperators and Bureau of Endangered Resources (BER) personnel conducted surveys on approximately 56 designated scientific areas and 100 natural areas throughout the state. At the end of the 1985 field season 160 of the 200 currently designated scientific areas have now been surveyed at least once.

Frog and Toad Survey

Cooperators conducted auditory surveys on approximately 56 routes throughout the state. This is the fifth year of the survey and the second year of a long term monitoring program using permanent routes. Many miscellaneous records of endangered and "watch" species were collected. A systematic survey of historic and potential cricket frog sites was also begun, and several new sites were documented for this endangered species. However, cricket frogs were absent from many historical sites.

Red-necked Grebe

The last thorough statewide census of red-necked grebes was undertaken in 1983 when a total of 63 pairs nested at five sites in three counties. In 1984 and 1985 the species nested in only three of these sites. Numbers are declining at the state's major colony on Rush Lake where the species has nested since the 1930's. This is likely due to higher water levels that have resulted from an artificial dam. We hope to initiate a research and management program during the next two years for this wetland, which is important for a number of nongame, threatened and endangered wildlife species. Experiments with artificial nesting structures in St. Croix County have been unsuccessful thus far.

Forster's Tern

A thorough survey of all traditional and potential nesting areas in 1985 revealed 416 pairs of Forster's terns nesting at 8 sites statewide. This number was down from 1984 due to high water levels in the Green Bay area. Of these nests, 248 were on platforms in Lake Poygan and Rush Lake. Forster's terns nested on all platforms set out. However, all nests on Rush Lake (43) were abandoned, evidently due to predation by great horned owls. One new nesting site on natural substrate was found in the Sensiba Wildlife Area.

Common Tern

Statewide the number of common tern nesting pairs and colony locations is increasing. A total of 644 nesting pairs occupied six island colony sites in northwestern and northeastern Wisconsin in 1985. Reproductive success, however, was dismal in part due to great horned owl predation, vegetative succession, and human disturbance. No more than 25 young are known to have fledged from the six combined sites.

Wisconsin participated for the second successive year in a study (directed by the Patuxent Wildlife Research Center) evaluating the effects of contaminants on the breeding success on Great Lakes common terns. The study sites included the Ashland Pier in Chequamegon Bay and a fenced portion of Kidney Island in Green Bay.

Great Egret

Data for 1985 season are as yet incomplete. Aerial and ground surveys of traditional and potential Great egret colonies in 1984 revealed an approximate statewide nesting population of 344 great egret pairs and a total of 8 colonies which ranged in size from 2-159 egret pairs. One of these colonies was new and another contained egret nests for the first time since 1973. Nesting great blue herons outnumbered great egrets in all colonies. Egret populations along the Mississippi River were surveyed in 1984 by the Wisconsin BER, the Iowa Conservation Commission and the Minnesota DNR. Seven colonies consisting of a total of 332 nests were located on the west side of the Mississippi River were just beyond Wisconsin's boundaries in Iowa and Minnesota. The total of 137 great egret nests along the Wisconsin side of the Mississippi represents a 24% decline from the 180-plus nests calculated for the same area in 1977.

Piping Plover

One breeding pair returned to a traditional Chequamegon Point territory on Lake Superior during the spring and early summer of 1985. Nesting attempts, however, were not evident; this is the second successive year that no production has occurred on Chequamegon Point. The Long Island-Chequamegon Point beach and dune communities continue to experience human disturbance. The invasion of Ammophila brevilligulata (beach or marram grass) is reducing the size of available nesting habitat. Development and maintenance of nesting habitat will be a priority in 1986.

Double-crested Cormorant

Wisconsin's double-crested cormorant population continued to expand in 1985 with 22 colonies containing a total of 2216 nesting pairs. In 1984 a total of 1,904 nesting pairs occupied 17 colonies. It would appear that at no time in this century has the state's cormorant population been as high or as widely distributed. A factor contributing to the recovery of the species has been the use of artificial nesting platforms in central and northeastern Wisconsin. The BER will be proposing to delist the species in 1986.

Loggerhead Shrike

During 1984 and 1985 BER collected substantial data on recent and historic nestings of this species. At least three active nests were documented in both years. Approximately 10 former nesting areas were surveyed and all found to be inactive.

Common Barn-owl

One pair of barn-owls nested successfully in both 1984 and 1985 in the same silver maple in the Village of Deerfield, eastern Dane County. In 1984 at least six young fledged. In 1985, four young fledged. A radio-telemetry

project initiated during the late summer of 1985 has provided information on the movement, habitat use, and dispersal of both wild and captive-produced barn-owls. Since 1982, 59 captive-produced barn-owls have been released in southeastern Wisconsin. The captive breeding program, involving the Milwaukee County Zoo, the International Crane Foundation and the Wisconsin DNR, as well as numerous volunteers, will continue in 1986.

Osprey

The 1985 osprey survey located 227 active territories of which 126 were successful and produced 249 young. Productivity in 1985 was similar to 1983 with 2.0 young per successful territory and 1.1 young per active nest site. Territories were located in North Central, Northwest, and West Central Districts.

Bald Eagle

Once again, records were set for the over-wintering population of eagles in Wisconsin. During the National Wildlife Federation's 1985 midwinter survey, cooperators reported sighting 211 bald eagles. The previous high count was 166 in 1984. A total of 138 observers were included in the survey.

The eagle nest survey for the 1985 breeding season located 246 territories with at least some degree of activity. Of these, the outcome was known for 214 occupied territories. Of these, 171 territories were successful producing 282 young. This compares to 1984 with 169 successful territories producing 279 young. This study was done with funds from Section 6 of the Federal Endangered Species Act and the "Adopt an Eagle Nest" program. Charles Sindelar led a team of biologists in an aerial survey of the nest sites and in banding young birds. Four eaglets were removed from nests containing three young and sent to Tennessee (2) and Indiana (2) for hacking projects in those states.

Karen Kozie, with funding from the National Park Service, is doing an extensive study of the eagles nesting in the Apostle Islands National Lakeshore. Through the use of telemetry equipment, she will be following the birds through their winter migration. She has also studied food use and nesting and fledging behavior of the birds. Two of the young birds which died this season were examined for possible contaminants, however, this was not found to be the cause of death.

Grassland Birds

Declining populations of several grassland bird species, including western meadowlark, dickcissel, grasshopper sparrow, upland sandpiper, and others prompted a survey of Wisconsin grassland bird communities. The main objective of the 1985 survey was to determine breeding bird species composition, diversity, and density on representative agricultural and grassland habitats in southern Wisconsin. The study included 110 transects in various hayfields, row crops, prairies, pastures, Waterfowl Production Areas, and other grassy fields in 9 counties. These were each surveyed three times during the height of the breeding season, and quantitative habitat data were collected. This study will be continued and expanded in 1986.

Bluebird

Many Wisconsin residents maintain bluebird nest box "trails" and some of these efforts have been coordinated in recent years by various local organizations and by a University of Wisconsin-Stevens Point graduate student. BER will begin developing a statewide network of bluebird trail cooperators with the help of a citizens recovery committee, to assess and increase bluebird populations and nest box use throughout the state.

Timber Wolf

Wolf Activity Study - Biologist Richard Thiel monitored the activities of the known wolf packs within the state. Wolves were trapped live, outfitted with radio collars, and their movements were monitored within the Douglas County study area (DCSA). Winter ground tracking aided in census surveys within this area. Ground tracking was also used exclusively in two of the other study areas. A midwinter census for the DCSA showed a total of 14-16 wolves in three packs. This is the largest of the three study areas. Monitoring of two Bootjack Pack wolves terminated in fall due to malfunctioning radios and the death of one of the wolves. However, a pair of wolves was still present in the Bootjack Pack area during July of 1985. In northeastern Wisconsin, surveys were unable to identify the territory of one wolf which had been found in the area for 4 years.

The midwinter 1984-85 census indicated the presence of 19-21 timber wolves throughout the state. Three radio collared wolves died of unknown causes during this period. Another wolf was disabled in a coyote trap and had to be destroyed. One other wolf, the alpha female of the Bootjack Pack, was shot during the November, 1984 deer season.

Parvovirus Study - Blood serological analyses have identified the presence of the viral disease, Canine parvovirus, in wild timber wolves.

In order to assess the danger and spread of parvovirus in wolves in Wisconsin and other states, Wisconsin's BER and Bureau of Wildlife Management are helping to conduct a study on the effects of parvovirus on timber wolf pups. No data have yet been released on the study.

Rural Road Density Effects on Timber Wolves - R. Thiel, in conjunction with other timber wolf surveys, has been doing studies on the effects of road densities on timber wolf movement. Results found that wolves failed to survive when road densities exceeded 0.93 mile/miles². This data is important for use in planning for and managing wolf habitat. Thiel, R.P. May 1985. 'Relationship Between Road Densities and Wolf Habitat Suitability in Wisconsin,' American Midland Naturalist, 113(2).

Most Wanted List and Miscellaneous Observations

BER is again requesting reports of sightings of endangered and threatened species and other species of concern. A 'most wanted' list is issued each year to solicit reports of nesting locations or sightings of particular species. Reports are commonly received from amateur and professional biologists throughout the state.

HABITAT MANAGEMENT

Barn-owl Nest Boxes

Ten barn-owl nest boxes were installed at selected sites in southern and southeastern Wisconsin bringing the total number of nest boxes to 30. More boxes will be installed in 1986. Four new sites for the release of captive produced barn-owls were established. A total of 5 release sites are currently utilized. Nest boxes and platforms were built by Madison East High School, Dane County Conservation League and Milwaukee Metro Audubon Society.

Forster's Tern Nest Platforms

The statewide nesting population declined from 800 pairs in 1984, to 416 pairs in 1985, due largely to high water levels that inundated traditional nest colonies on the west shore of Green Bay. In 1985 BER installed 200 nest platforms for Forster's terns in traditional nesting areas on Lake Poygan, Winnebago County. Terns nested on all of these platforms. As during the past five years, these platforms have supported the largest and probably the most successful population of Forster's terns statewide. Observations of nesting birds from blinds in both natural and platform nesting situations documented the efficacy of the current platform design and suggested improvements to be tested in 1986.

Forster's terns have been declining at Rush Lake, Winnebago County over the last decade due to loss of emergent vegetation. Forty-three pairs were attracted to the lake in 1985 through the use of artificial platforms, but the entire colony was abandoned due to great horned owl predation. In 1986, the nest platform program will be expanded in these and other traditional nesting areas where the nest habitat appears to be limiting. The effects of platform location on nest success will also be experimented with.

Common Tern Habitat Management

During the winter of 1984 and 1985 a bulldozer selectively removed much of the dense woody vegetation on Interstate Island in the Duluth-Superior Harbor. Common tern decoys and a sound system with tern vocalizations were placed on the island in May. A total of 41 pairs nested here but failed to produce young, due in part, to great horned owl disturbance. At Barkers Island (also in the harbor) where common terns formerly nested, an effort was made to attract nesting terns using decoys and a similar sound system. No terns nested here in 1985.

At the Ashland Pier colony site DNR management efforts focused on the removal of ring-billed gull nests and eggs throughout May and during early June. Colonization of nesting habitat by ring-billed gulls constitutes an ongoing threat to tern colony stability.

BER recently received a \$45,000 grant from the Wisconsin Coastal Zone Management Program to repair the Ashland Pier nesting site and to create a crib island northwest of the Lake Superior District Power Plant. DNR will contract with the City of Ashland to perform the construction.

At Kidney Island selected portions of the island received herbicide treatment in an effort to control smartweed growth, a serious factor in limiting nesting success. Common tern nesting attempts were disrupted by the untimely operation of a tractor, used under contract through the U S. Army Corps of Engineers. It is uncertain at this time how many young terns and eggs were destroyed.

Piping Plover

At Interstate Island habitat improvements began during the winter of 1984 in an effort to establish a colony of nesting common terns and habitat for piping plovers (see above). No plovers were observed at the site in 1985.

Double-crested Cormorant Management

Double-crested cormorant platforms continue to be installed or maintained at locations in northwestern and central Wisconsin. A survey of platform use and condition was completed by Sumner Matteson in 1985.

Fourmile Island Management

BER and other DNR representatives are developing a research and management plan for this island that supports the state's largest great egret colony. In recent years numbers of great egrets, great blue herons, and black-crowned night herons have declined due to long-term deterioration of the islands canopy which is affected by dutch elm disease, oak wilt, wind throw, and guano deposits.

Osprey Management

Osprey platforms have been built at likely nesting sites throughout central and northern Wisconsin and the Lake Michigan area. Existing platforms will be maintained and new platforms will be constructed as deemed necessary in specific sites.

Bald Eagle Management

In conjunction with the annual bald eagle survey all young eagles in known nests in the state were banded. Biologists also salvaged all injured or orphaned young. Ongoing efforts are made to work with landowners of all nest sites to protect the nests from human disturbances. Cooperative efforts are underway with the National Forest Service staff to protect existing nests and to retain supercanopy pine trees for future potential nests.

Recovery Plans

The common barn-owl plan has been completed and is currently being reviewed by experts and outside agencies. The timber wolf and pine marten recovery plans are undergoing review by DNR field staff. The osprey and bald eagle recovery plans are presently undergoing internal review. Other recovery plans are in progress.

NATURAL AREAS SECTION

Natural Areas Land Acquisition

Natural Areas land acquisition resulted in establishment of three new natural areas. Additional acquisitions were made at several established natural areas. In total 208 acres were acquired, at a cost of \$172,000.

New Areas Acquired

1. Ipswich Prairie Natural Area - Grant and Lafayette Counties	20 acres
2. Kessler Railroad Prairie - Rock County	10 acres
3. Lost Lake - Columbia County	70 acres
	<u>100 acres</u>

Additions

1. Bark Bay Natural Area - Bayfield County	3 acres
2. Bibon Swamp Natural Area - Bayfield County	40 acres
3. Shaky Lake Natural Area - Outagamie County	40 acres
4. Rush Creek Natural Area - Crawford County	25 acres
	<u>108 acres</u>

Natural Area Dedications

Two Natural Areas were added to the Natural Areas system through dedication.

1. Black Lake Bog - Douglas County Forest	2,200 acres
2. Riveredge Creek and Ephemeral Pond - Riveredge Nature Center - Ozaukee County	65 acres
	<u>2,265 acres</u>

Natural Areas Management, Protection and Use

Management plans were completed for five new natural areas and revisions completed for five others. Sixty natural areas were inspected to assess ecological and public use impacts and determine management needs. Property managers and program staff prescribe burned 11 natural areas and implemented brush control on 14 natural areas. Purple loosestrife control was applied on five properties with six additional sites inspected for its presence. Both Wisconsin Conservation Corps and Youth Conservation Corp crews were used to facilitate field management.

Six scheduled facility development projects were initiated and/or completed. These projects include boardwalks, parking lots, fences, and permanent firebreaks. A summary of projects by DNR Districts is presented in the accompanying tables.

The success of this management and development effort rests with expanded funding, increased use of volunteers and outstanding cooperation and dedication by the property managers involved.

A survey of property managers and known research and educational users was conducted to develop a preliminary estimate of formal and informal use. With reporting incomplete at least 40,328 individuals participated in formal educational studies as compared to 15,000 individuals estimated in 1977. Total use for 1984-85 will exceed 350,000.

Work continued on developing guidelines for baseline monitoring on natural areas, however, funding shortfalls curtailed initiation of the first monitoring projects. Baseline monitoring will provide researchers and educators with quantitative vegetative and qualitative animal reference information, and natural area managers with records to monitor change. Aquatic communities will also have physical and chemical features measured. Funds may be available in late 1985-86 for a limited number of baseline monitoring projects.

Master Planning

Staff took an active role in reviewing and commenting on 20 DNR property master plans. Three of the property master plans required extensive review, and in some cases assistance in plan development (Lulu Lake, Lower Wisconsin River, and Brunet Island State Park). Six properties with newly approved plans included recommendations for new state natural areas or public use natural areas.

Coordination Activity

Natural Areas Section staff and the Natural Areas Preservation Council members worked extensively with The Nature Conservancy in developing the Natural Heritage-Match Grant legislation which was passed as part of the 1985-87 budget.

This landmark legislation sponsored by The Nature Conservancy (TNC) provided new funding for natural area-critical species inventories, new legal dedication capability for both public and private lands, new funding to match dollar for dollar private contributions of land, land interests or cash up to \$500,000 per year and stewardship funding of \$40,000 per year. Legislative action will be needed in two years to continue the inventory and hopefully provide the necessary positions which were not included this year. A contract with TNC will train personnel and provide technical guidance during the first two years.

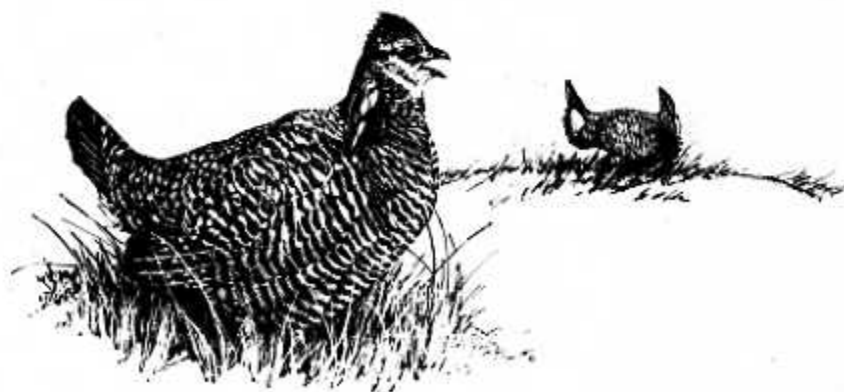


MAINTENANCE, DEVELOPMENT AND MONITORING PROJECTS CONDUCTED ON STATE NATURAL AREAS IN 1985

LAKE MICHIGAN DISTRICT	Agency Land Control	ACTION TAKEN
<u>MARINETTE AREA</u>		
<u>Marinette County</u> 37 Seagull Bar	DNR WM	Control of purple loosestrife by pulling
<u>Oconto County</u> 39 Charles Pond	DNR WM	Control of purple loosestrife by pulling
<u>OSHKOSH AREA</u>		
<u>Outagamie County</u> 180 Shaky Lake	DNR ER	Control of purple loosestrife by pulling and removed small building
<u>Waupaca County</u> 179 Myklebust Lake	DNR ER	Control of purple loosestrife by pulling and removed beaver dam
194 Pope Lake	DNR P&R-Hartman Creek State Park	Control of purple loosestrife by pulling
<u>Waushara County</u> 178 Bass Lake Fen	DNR ER	Cut encroaching trees
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NORTH CENTRAL DISTRICT	Agency Land Control	ACTION TAKEN
<u>WOODRUFF AREA</u>		
<u>Vilas County</u> 34 Bittersweet Lakes 107 Johnson Lake Barrens	DNR FOR-Northern Highland State Forest DNR FOR-Northern Highland State Forest	Erosion and access control Removed encroaching jack pine and aspen
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NORTHWEST DISTRICT	Agency Land Control	ACTION TAKEN
<u>CUMBERLAND AREA</u>		
<u>Polk County</u> 147 Sterling Barrens	DNR FOR-Gov. Knowles State Forest	Constructed permanent firebreaks
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SOUTHEAST DISTRICT	Agency Land Control	ACTION TAKEN
<u>MILWAUKEE AREA</u>		
<u>Ozaukee County</u> 67 Fairy Chasm	The Nature Conservancy	Cut honeysuckle
<u>Sheboygan County</u> 71 Kohler Park Dunes	DNR, P&R - Kohler Andrae State Parks	Cut ornamental trees encroaching on the dunes and control of purple loosestrife by pulling
<u>Walworth County</u> 132 Young Prairie	DNR ER	Prescribed burn 30 acres
<u>Waukesha County</u> 6 Scuppernon Prairie 138 Lulu Lake Fen 153 Genesee Oak Opening and Fen	DNR P&R-KM State Forest, South Unit DNR P&R-KM State Forest, South Unit DNR ER	Prescribed burn 20 acres Removed beaver dam Prescribed burn 10 acres

MAINTENANCE, DEVELOPMENT AND MONITORING PROJECTS CONDUCTED ON STATE NATURAL AREAS IN 1985

<u>SOUTHERN DISTRICT</u>	<u>Agency Land Control</u>	<u>ACTION TAKEN</u>
<u>DODGEVILLE AREA</u>		
<u>Iowa County</u> 68 Avoca Prairie-Savanna	DNR WM-Lower Wis. River Wildlife Area	Cut aspen on 10 acres
<u>Lafayette County</u> 167 Belmont Mound Woods 195 Ipswich Prairie	DNR P&R-Belmont Mound State Park DNR ER	Baseline monitoring Removed 30 piles of railroad ties and brush
<u>Sauk County</u> 1 Parfrey's Glen 102 Spring Green Reserve	DNR P&R -Devil's Lake State Park The Nature Conservancy	Rebuilt eroded trail Prescribed burn prairie
<u>HORICON AREA</u>		
<u>Dodge County</u> 41 Fourmile Island Rookery	DNR WM-Horicon Marsh Wildlife Area	Nest survey of rookery
<u>Marquette County</u> 42 Summerton Bog 96 (Muir's) Ennis Lake-Muir Park	The Nature Conservancy Marquette County	Prescribed burn 50 acres Cut aspen encroaching on prairie
<u>MADISON AREA</u>		
<u>Dane County</u> 146 Westport Drumlin Prairie	DNR ER	Removed sweet clover, parsnip, black locust and other encroaching trees; inventoried prairie bush clover; erected boundary fence
<u>Green County</u> 139 Muralt Prairie	Green County	Prescribed burn 20 acres & cut sumac and established permanent firebreaks
<u>Jefferson County</u> 3 Faville Prairie 63 Waterloo Fen and Springs 168 Snapper Prairie	UW-Madison Arboretum DNR WM-Waterloo Wildlife Area The Nature Conservancy	Prescribed burn 40 acres Cut aspen encroaching on fen Inventoried 4 species of endangered & threatened plants; baseline monitoring; and cut aspen and cottonwoods
<u>Rock County</u> 64 Swenson Wet Prairie 113 Newark Road Prairie	DNR WM-Avon Bottoms Wildlife Area Beloit College Biology Dept.	Cut aspen Prescribe burn and cut brush



MAINTENANCE, DEVELOPMENT AND MONITORING PROJECTS CONDUCTED ON STATE NATURAL AREAS IN 1985

<u>WEST CENTRAL DISTRICT</u>	<u>Agency Land Control</u>	<u>ACTION TAKEN</u>
<u>BLACK RIVER FALLS AREA</u>		
<u>Trempealeau County</u> 9 Brady's Bluff Prairie	DNR P&R-Perrot State Park	Constructed permanent firebreaks
<u>EAU CLAIRE AREA</u>		
<u>Pepin County</u> 76 Five Mile Bluff	DNR-WM Tiffany Wildlife Area	Constructed permanent firebreaks & cut aspen encroaching on prairie
<u>Pierce County</u> 136 Trenton Bluff Prairie	DNR ER	Prescribed burn 20 acres and established permanent firebreaks
<u>LA CROSSE AREA</u>		
<u>Crawford County</u> 170 Rush Creek Natural Area	DNR ER	Constructed permanent firebreaks & cut trees encroaching on prairie
<u>Vernon County</u> 177 Battle Bluff Prairie	DNR ER	Constructed permanent firebreaks

Key to acronyms:

DNR - Wisconsin Department of Natural Resources
WM - Bureau of Wildlife Management
ER - Bureau of Endangered Resources
PR - Bureau of Parks and Recreation
FOR - Bureau of Forestry
KM - Kettle Moraine
UW - University of Wisconsin



NATURAL HERITAGE INVENTORY SECTION

(Includes activities conducted by the former Natural Area Inventory program)

The 1985 State budget authorized the new Wisconsin Natural Heritage Inventory program, expanding on the efforts of the Bureau of Endangered Resources. One thrust of this legislation establishes a Natural Heritage Inventory system utilizing The Nature Conservancy methodology. This new inventory program is responsible for the gathering and management of information on the occurrences and ecology of Wisconsin's natural communities and plant and animal species.

The DNR has contracted with The Nature Conservancy to aid in the establishment of the Natural Heritage Inventory program including training of BER staff.

Implementation

The new Natural Heritage Inventory is staffed by a coordinator/zoologist, a botanist, an ecologist, a data base manager and a clerical assistant.

Training of the staff members was completed at The Nature Conservancy's national headquarters at Arlington, VA. A new IBM PC AT computer and accessories have been installed and is ready for data entry. Various manual and map files have also been set up on the Heritage format. Working lists of communities and species of special concern are being reviewed by experts around the state. This working list is broader in scope than our previous inventory and includes rare invertebrates and the lower plants (mosses, lichens and liverworts).

Other Inventory Activities

Editing and mapping of six West Central District counties was completed in preparation for distribution of Natural Area Inventory summaries.

Kitten Tail Survey

The BER received Federal funding this year to conduct a state-wide status survey for the state threatened Besseyia bullii (Kitten tails). This prairie plant is under review for possible listing as a federally endangered or threatened species. Fourteen southeastern and west-central counties were surveyed in an attempt to locate historical populations and identify new sites. Of the approximately 50 known historical sites, 27 were relocated while 12 new populations were discovered. Data on habitat, numbers and threats to each population were recorded in an attempt to determine the reasons for the plant's apparent decline.

Monkshood Survey

With funding from Section 6 of the Endangered Species Act, a thorough survey was done to assess populations of Aconitum noveboracense (Monkshood) throughout southwestern Wisconsin. Hundreds of potential monkshood sites were surveyed; however, no new major populations were found. This leaves six known

populations of monkshood within the state. These populations have a combined total of less than 5,000 plants. Efforts are being made by BER and The Nature Conservancy to preserve some of the privately-owned sites.

BER is also working with the University of Wisconsin-Milwaukee to propagate monkshood in greenhouses and transplant the plants to historic sites of occurrence. This project should result in increased number of monkshood plants and sites.

An article on the Monkshood project was submitted to the Wisconsin Botanical Club for publication.

Environmental Impact Reviews and Assessments

From January 1, 1985 until November 15, 1985 BER has responded to 164 requests for information on occurrences of critical resources. BER staff also reviewed numerous master plans for the long range management and use of state parks, fish and wildlife areas and state forests.



ADMINISTRATION

Funding

Contributors to the Endangered Resources Fund for 1985 donated \$472,000. This amount was up substantially from the \$291,000 contributed in 1984. The number of contributors rose from 47,000 to 70,000 and the average contribution went from \$6.27 to \$6.70.

National Forest Management Plans

Both the Chequamegon and Nicolet National Forests released drafts of their Proposed Land and Resource Management Plans in 1985. BER staff extensively reviewed and commented on the plans. Several meetings were held with the forest planners to help revise the plans to assure adequate protection for the timber wolf, rare plants, natural areas, state listed endangered and threatened species and nongame wildlife. The final plans are scheduled for completion in early 1986.

Ginseng Permits

In 1984 the wild ginseng harvest in Wisconsin totalled 3,657.02 pounds. There were 23 licensed dealers in the state.

Volunteer Coordination

Since its inception BER has been working with volunteers to cooperate in research and management projects. As the breadth of the program has increased, so has the need for organizing the growing numbers of volunteers. With the aid of computerized listings, volunteers are categorized by their areas of interest. This aids in the identification of potential volunteers for specific projects. In 1984, approximately 347 people contributed over 2600 hours in volunteer time.

In October of 1985 BER hosted its first annual "BER Appreciation Picnic". The purpose of the picnic was to thank volunteers, legislators, organizations and others who have helped the Endangered Resources Program in the past year. Approximately 250 people attended the picnic, went on field trips and met with other volunteers and BER staff. The picnic was considered a success by guests and staff and will most likely be held each fall.

Snakebusters

BER and the Wisconsin Herpetological Society have developed a cooperative program in an effort to deal with conflicts between people and timber rattlesnakes. When citizens with snake complaints call DNR or local authorities, they are referred to WHS volunteers. The herpetologists go to the problem site and remove the snake(s) and provide the residents with information or methods to discourage snakes near their homes. To date the program has proven very effective.

LEGISLATIVE ACTION

Increased Fines for Killing Endangered and Threatened Species

In 1985 a bill was introduced into the legislature that would increase the penalty for taking endangered and threatened animals to a forfeiture of not less than \$500 nor more than \$2000 and a mandatory 1-year revocation of all hunting licenses. This bill has passed unanimously on the Senate floor and will likely be passed by the Assembly after January, 1986.

Long Island Acquisition

U.S. Congressional Representative, David Obey, introduced a bill to add Long Island to the Apostle Islands National Lakeshore. Sumner Matteson, of BER has worked with Obey's office and others to assure that the critical nesting habitat for piping plovers and common terns is included in the area being considered for protection. This bill was passed by the House of Representatives and as of December 1985, was still to be discussed and voted on by the Senate.

Rehabilitation Rules

BER is working with the Bureau of Law Enforcement to develop rules to regulate wildlife rehabilitators in the state.

Mussel Regulations

Wisconsin DNR representatives have been meeting with representatives from the Iowa Conservation Commission, Minnesota DNR, the clamming industry, Conservation Congress, and the state legislature to develop rules for the commercial harvest of clams. Where possible, these rules will be consistent with those being developed in Iowa, Minnesota and Illinois. Legislative statutes and administrative codes are presently being drafted by DNR's Bureau of Fish Management and legal counsel and reviewed by all interested parties. If compromises can be reached regulations may be in effect for the 1986 harvest season.

Endangered and Threatened Plants

Twenty species of wild plants were added to the Wisconsin Endangered and Threatened Species list as of April 1, 1985. Eight species attained endangered status and 12 attained threatened status based on the consideration of several factors: known history of population, known decline and existing threats to the remaining populations, and status through the species range.

Noxious Weed Law

A bill has passed out of an Assembly Committee that would add three new plants to the statewide noxious weed law: Lythrum salicaria (purple loosestrife), Rosa multiflora (multiflora rose) and Cannabis sp. (marijuana). This bill may be important in slowing the spread of purple loosestrife in wetland areas.

Lead Shot Ban

A bill to ban the use of lead shot for all waterfowl hunting throughout the state has passed in the Senate and is presently in an Assembly Committee. This bill is expected to pass in the January 1986 legislative session.



INFORMATION AND EDUCATION

Tax Checkoff Promotion

The 1985 tax season was the second year for Wisconsin's Endangered Resources Tax Checkoff. Expanded publicity efforts focused on encouraging participation by the tax preparers and on mass media promotion efforts such as billboards, newspaper articles, and radio and television public service announcements. Efforts were made to combine the checkoff promotion with educational materials.

Project WILD

The Bureaus of Information and Education and Wildlife Management have initiated the use of Project WILD curricula in Wisconsin classrooms. The program provides teachers with curricula materials and ideas to help teach wildlife, ecology, natural history and related ecological concepts. BER has aided in the training of facilitators and resource managers and has provided financial support.

Raptor Symposium

BER and the Madison Audubon Society cooperated in putting on a day-long symposium on raptor biology and management. Topics of discussion ranged from the status and distribution of Cooper's hawks to techniques in raptor rehabilitation. The symposium was well attended and enjoyed by participants.

Adopt An Eagle Nest Program

For the 1985 nesting season, BER initiated a new program to increase public awareness of the plight of bald eagles and concurrently to raise money for the annual eagle survey and banding project. For a \$100 donation, individuals or organizations are able to "adopt" a nest and help pay for its management and protection. The donors receive information on the status of the nest they adopted and any young that were raised in it. They also receive a photograph of young eagles in the nest, an "adoption" certificate, and a copy of Birds of Prey of Wisconsin. One hundred and three nests were adopted in the 1985 season. For 1986 season all contributors will also receive a free art print of bald eagles, donated by wildlife artist Rich Van Order.

State Fair

BER again set up and staffed an educational display at the annual Wisconsin state fair. The theme of the DNR exhibit was water and wetlands. The major part of the BER display was a wetlands trivia game. A display on the "Adopt An Eagle Nest" program was set up adjacent to an artificial eagles nest which will be a permanent part of the DNR exhibit.

Endangered Resources Report Series

BER has compiled technical reports of surveys, research, management or other projects either funded in part by the program or performed by BER staff. The report series includes reports dating back to 1983. Reprints will be made available upon request. Anyone interested in obtaining a copy of the list of reports should contact BER (address on cover page).

Audio/Visual Material

BER maintains a library of audio/visual materials which are available to be loaned to the public. Recent slideshow additions to this library include: "Saving America's Bats," by Bat Conservation International and "Wisconsin's Reptiles and Amphibians," by Dr. Ruth Hine. Richard Thiel put together a slide show and script which summarizes the status of timber wolves in Wisconsin and the research work that has been done with them.

Television Features

In the past year numerous Endangered Resources programs have been featured on "Outdoors Wisconsin", "Wisconsin Magazine" and several local news shows. Featured programs have included a barn-owl release, common tern management, mid-winter bald eagle survey, turkey vulture surveys, Four-mile Island egret colony, and sandhill cranes at Comstock Marsh.

Purple Loosestrife

In an effort to slow the spread of this invasive non-native weed, BER has cooperated with the Purple Loosestrife Task Force and the Bureau of Research to help design and distribute an informational poster on purple loosestrife. The Bureau of Research coordinated a statewide survey to determine the extent and distribution of loosestrife infestation. The Department's loosestrife study committee has made recommendations to attempt to control loosestrife on state lands, perform research on methods for eradication and push for legislation to ban the sale of the plant.

Nongame Program Display

BER developed a three-panel display describing several of the major projects of the Endangered, Threatened & Nongame Species program. This display was made for Midwest Fish and Wildlife agencies conference and is available for other uses.

"The Land" Videotape

Working with the Natural Areas staff, the Bureau of Information and Education developed a 25 min. videotape entitled "The Land." The reasons and methods for preserving the states diverse natural areas are exhibited in this tape.

The Bureau of Endangered Resources wishes to thank the thousands of persons who made these projects possible by contributing to the Endangered Resources Fund on the state's income tax form. We also would like to thank all of the volunteers and others who have cooperated to help protect and manage Wisconsin's rare plant and animal communities.

